

AMENDMENT TO THE CLAIMS

1. (canceled)
2. ~~The method of claim 1, further comprising:~~ A method for temporally filtering a video sequence, the method comprising:  
using object motion estimation for arbitrarily shaped segments to align  
corresponding pixels between at least two frames;  
determining segments that are no longer adjacent to a segment boundary based on  
said object motion estimation;  
reducing impact of color blur from said segments that are no longer adjacent by  
adjusting [[the]] weights assigned to one or more frames for pixels that lie within a blur  
region near [[a]] said segment boundary; and to reduce the impact of color blur from  
~~segments that are no longer adjacent.~~  
computing a weighted average of color values of said corresponding pixels.
3. (currently amended) The method of ~~claim 1~~ claim 2, further comprising:  
setting the weight for one or more past frames to zero for pixels that lie  
within a newly exposed area.
4. (currently amended) The method of ~~claim 1~~ claim 2, further comprising:  
determining additional motion information across GOP boundaries to  
allow filtering across these boundaries.
5. (currently amended) The method of ~~claim 1~~ claim 2, further comprising:  
calculating a lighting offset, ~~expressing the~~ which expresses a difference  
in lighting for a segment between two frames[[,]]; and using said lighting offset to  
correct [[the]] lighting discrepancies caused by averaging pixels from frames with  
different lighting.
6. (currently amended) An apparatus for temporally filtering a video sequence,  
wherein object motion estimation for arbitrarily shaped segments is used to align

corresponding pixels between at least two frames and to determine segments that are no longer adjacent to a segment boundary, wherein weights assigned to one or more frames are adjusted for pixels that lie within a blur region near said segment boundary to reduce impact of color blur from said segments that are no longer adjacent to said segment boundary, and wherein said apparatus computes a weighted average of [[the]] color values of said corresponding pixels.

7. (canceled)

8. (currently amended) ~~The method of claim 7, further comprising:~~ A method for temporally filtering a video sequence using motion compensation, the method comprising:  
estimating motion of objects between frames in the video sequence;  
aligning pixels from a current frame with matching pixels from select neighboring frames according to the estimated motion of a surrounding object;  
calculating a weighted average of the aligned pixels for each pixel in the current frame to produce a filtered version of the current frame; and  
 adjusting weights used to calculate the weighted average in order to compensate for blur transitions near object boundaries due to temporal changes in adjacent objects.

9. (original) The method of claim 8, wherein the adjustment of weights comprises a reduction of a weight multiplier in a blur region near an exposed area.

10. (original) The method of claim 8, wherein the adjustment of weights comprises a reduction of a weight multiplier in a blur region between converging objects.

11. (currently amended) The method of ~~claim 7~~ claim 8, wherein the estimation of motion is between frames that are across a group of pictures (GOP) type boundary which does not involve a scene change.

12. (currently amended) The method of ~~claim 7~~ claim 8, further comprising:  
 calculating a lighting offset; and

applying the lighting offset prior to calculating the weighted average in order to compensate for lighting shifts.